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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,331	07/09/2003	Stephen E. Terry	I-2-0409.1US	1330

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EXAMINER	
NGUYEN, TOAN D	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 08/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/616,331	TERRY ET AL.	
	Examiner	Art Unit	
	Toan D. Nguyen	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *5/27/04*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chang et al. (US 2003/0016698) in view of Vayanos et al. (US 6,901,063).

For claims 1-6, Chang et al. disclose method for resetting MAC layer entity in a W-CDMA communication system using HSDPA comprising:

the RNC for generating a medium access control (MAC) layer reset notification (figure 9, reference step 911, paragraphs [0068] to [0071]);

a control unit within said UE for receiving said notification (figure 18, reference step 1805, paragraph [0092]); and

upon receipt of the MAC layer reset notification (figure 9, reference step 911, paragraphs [0068] to [0071]).

However, Chang et al. do not expressly disclose:

flushing said at least one reordering buffer upon receipt of the MAC layer reset notification;

a status determination unit within said UE for determining, subsequent to the flushing of said reordering buffer, the status of PDUs received by the UE, and for generating a status report based upon said determination; and

a transmitter for transmitting said status report to said RNC.

In an analogous art, Vayanos et al. disclose:

flushing said at least one reordering buffer upon receipt of the MAC layer reset notification (col. 10 lines 51-52);

a status determination unit within said UE for determining, subsequent to the flushing of said reordering buffer, the status of PDUs received by the UE, and for generating a status report based upon said determination (col. 8 lines 9-18); and

a transmitter for transmitting said status report to said RNC (col. 8 lines 41-48).

Vayanos et al. disclose wherein the status determination unit performs said determination in response to a control signal which indicates that the reordering buffer has been flushed of all PDUs (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 2), wherein said control signal is an end-of-PDU indication which is generated when all of the PDUS in the reordering buffer have been flushed (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 3), wherein the last PDU in the reordering

buffer is unique, and said control signal comprises the last PDU (col. 9 lines 47-58 as set forth in claim 4), wherein the last PDU in the reordering buffer includes a special indicator, and said control signal comprises said special indicator (col. 12 lines 40-44 as set forth in claim 5), wherein the control unit generates said control signal when the reordering buffer has been flushed of all PDUs (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 6).

One skilled in the art would have recognized the flushing said at least one reordering buffer, and would have applied Vayanos et al.'s control channel in Chang et al.'s process of resetting the receiver MAC-hs by the receiver RLC. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Vayanos et al.'s data delivery in conjunction with a hybrid automatic retransmission mechanism in CDMA communication system in Chang et al.'s method for resetting MAC layer entity in a W-CDMA communication system using HSDPA with the motivation being to provide the HARQ Activity Scheme to be able to flush the packets to higher layers (col. 10 lines 51-52).

For claim 7, Chang et al. disclose whereby the RNC halts data transmissions upon generation of the MAC layer reset notification (figure 18, paragraph [0092]).

For claim 8, Chang et al. disclose whereby the RNC restarts data transmissions upon receipt of said status report (figure 18, paragraph [0092]).

For claim 9, Chang et al. disclose whereby the RNC restarts data transmissions upon receipt of a predetermined trigger (figure 18, paragraph [0092]).

For claim 10, Chang et al. disclose whereby said predetermined trigger is the receipt of said status report (figure 18, paragraph [0092]).

For claim 11, Chang et al. disclose whereby the UE generates an in-sync indication and said predetermined trigger is the receipt of said in-sync indication (figure 1, paragraph [0017]).

For claims 12-17, Chang et al. disclose method for resetting MAC layer entity in a W-CDMA communication system using HSDPA comprising:

detecting at the RNC the need for an HS-DSCH cell change (paragraph [0011] lines 17-26);

notifying the UE to perform a medium access control (MAC) layer reset (figure 9, reference step 911, paragraphs [0068] to [0071]);

resetting a MAC layer entity, at said UE, upon receipt of a notice for the MAC layer reset (figure 18, reference step 1805, paragraph [0092]).

However, Chang et al. do not expressly disclose:

including flushing of said at least one reordering buffer;

determining, subsequent to the resetting step, the status of PDUS received at the UE;

generating a status report based upon said determination; and

transmitting from the UE to the RNC said status report.

In an analogous art, Vayanos et al. disclose:

including flushing of said at least one reordering buffer (col. 10 lines 51-52);

determining, subsequent to the resetting step, the status of PDUS received

at the UE (col. 8 lines 9-18);

generating a status report based upon said determination (col. 8 lines 9-18); and

transmitting from the UE to the RNC said status report (col. 8 lines 41-48).

Vayanos et al. disclose wherein said determining step is performed in response to a control signal which indicates that the reordering buffer has been flushed of all PDUs (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 13), wherein said control signal is an end-of-PDU indication which is generated when all of the PDUs in said at least one reordering buffer have been flushed (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 14), wherein the last PDU in said at least one reordering buffer is unique, and said control signal comprises the last PDU (col. 9 lines 47-58 as set forth in claim 15), wherein the last PDU in said at least one reordering buffer includes a special indicator, and said control signal comprises said special indicator (col. 12 lines 40-44 as set forth in claim 16), further including generating said control signal when the reordering buffer has been flushed of all PDUs (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 17).

One skilled in the art would have recognized the including flushing of said at least one reordering buffer, and would have applied Vayanos et al.'s control channel in Chang et al.'s process of resetting the receiver MAC-hs by the receiver RLC. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Vayanos et al.'s data delivery in conjunction with a hybrid automatic retransmission mechanism in CDMA communication system in Chang et al.'s method for resetting MAC layer entity in a W-CDMA communication system using HSDPA with

the motivation being to provide the HARQ Activity Scheme to be able to flush the packets to higher layers (col. 10 lines 51-52).

For claim 18, Chang et al. disclose further including halting data transmissions upon said detection (figure 18, paragraph [0092]).

For claim 19, Chang et al. disclose further including restarting data transmissions upon receipt of said status report (figure 18, paragraph [0092]).

For claim 20, Chang et al. disclose further including restarting data transmissions upon receipt of a predetermined trigger (figure 18, paragraph [0092]).

For claim 21, Chang et al. disclose whereby said predetermined trigger is the receipt of said status report (figure 18, paragraph [0092]).

For claim 22, Chang et al. disclose further including generating at the UE an in-sync indication and said predetermined trigger is the receipt of said in-sync indication (figure 1, paragraph [0017]).

For claims 23-27, Chang et al. disclose method for resetting MAC layer entity in a W-CDMA communication system using HSDPA comprising:

a control unit for detecting a medium access control (MAC) layer reset indication (figure 9, reference step 911, paragraphs [0068] to [0071], and [0092]).

However, Chang et al. do not expressly disclose:

flushing said at least one reordering buffer in response to said MAC layer reset indication;

a status determination unit for determining, subsequent to flushing of said reordering buffer, the status of data received by the UE;

a status report generator for generating a status report based upon said determination; and

a transmitter for transmitting said data status report.

In an analogous art, Vayanos et al. disclose:

flushing said at least one reordering buffer in response to said MAC layer reset indication (col. 10 lines 51-52);

a status determination unit for determining, subsequent to flushing of said reordering buffer, the status of data received by the UE (col. 8 lines 9-18);

a status report generator for generating a status report based upon said determination (col. 8 lines 9-18); and

a transmitter for transmitting said data status report (col. 8 lines 41-48).

Vayanos et al. disclose wherein the status means performs said determination in response to a control signal which indicates that the reordering buffer has been flushed of all PDUs (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 24), wherein said control signal is an end-of-PDU indication which is generated when all of the PDUs in the reordering buffer have been flushed (col. 10 lines 47-49 and col. 10 lines 51-52 as set forth in claim 25), wherein the last PDU in the reordering buffer is unique, and said control signal comprises the last PDU (col. 9 lines 47-58 as set forth in claim 26), wherein the last PDU in the reordering buffer includes a special indicator, and said control signal comprises said special indicator (col. 12 lines 40-44 as set forth in claim 27).

One skilled in the art would have recognized the flushing said at least one reordering buffer in response to said reset indication, and would have applied Vayanos et al.'s control channel in Chang et al.'s process of resetting the receiver MAC-hs by the receiver RLC. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Vayanos et al.'s data delivery in conjunction with a hybrid automatic retransmission mechanism in CDMA communication system in Chang et al.'s method for resetting MAC layer entity in a W-CDMA communication system using HSDPA with the motivation being to provide the HARQ Activity Scheme to be able to flush the packets to higher layers (col. 10 lines 51-52).

Response to Arguments

4. Applicant's arguments filed 06/02/06 have been fully considered but they are not persuasive.

The applicant argues with respect to claims 1, 12, and 23, that Vayanos fails to disclose that the reordering buffer is flushed upon receipt of the MAC layer reset notification. In addition, Vayanos fails to disclose that the UE, after flushing the reordering buffer, determines status of received PDUs and generates a report of the received PDUs to feed back to the RNC for retransmission of missing PDUs. The applicant further argues that both Chang and Vayanos fail to disclose that the UE flushes reordering buffer upon receipt of the MAC layer reset notification to a higher layer, and that the UE determines status or received PDUs and transmits a report to the RNC upon receipt of the MAC layer reset notification. The examiner disagrees.

Applicant's attention is directed to Chang patent at page 5, paragraph [0068] (see figure 9), where Chang clearly teaches "Referring to FIG. 9, the MAC-DATA primitive is used as a primitive for transmitting information indicating reset of an RLC 900 to a MAC-hs 950." (upon receipt of the MAC layer reset notification means). Vayanos discloses at col. 10 lines 47-49, "the data in all re-ordering queues can be delivered by the re-ordering entities to higher layers.", and at col. 10 lines 51-52, "the HARQ channels in order to be able to flush the packets to higher layers." Vayanos discloses at col. 7 lines 13-21,"One HARQ entity is provided to handle HARQ functionality for each UE. The HARQ entity performs transmission and (if necessary) retransmissions of packet to ensure delivery of these packets are performed base on feedback from the UE. This feedback is in the form of an acknowledgment (ACK) to indicate successful decoding of a packet or a negative acknowledgement (NAK) to indicate an unsuccessful decoding of the packet."

Furthermore, Vayanos discloses at col. 8 lines 11-18, "the UE reports (status report means) back one of the following: (1) an ACK to indicate that the packet has been received correctly, (2) a NAK to indicate that the packet has been received in error (i.e., erased), or (3) nothing (i.e., a discontinuous transmission (DTX) bit) if it failed to detect (missed) the corresponding HS-SCCH. This feedback information is transmitted from the UE in a designated subframe 514 on the uplink HS-DPCCH." (the UE determines status or received PDUs and transmits a report to the RNC means). Therefore, Chang in view of Vayanos do disclose all the limitations in claims 1, 12, and 23.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN
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